

Appl. No. 10/056,157
Reply to Office action of January 21, 2005
Docket. No.: 001.0058 (CE04625N)

REMARKS:

Applicant appreciates the thorough examination of the application that is reflected in the Office Action dated January 21, 2005. Applicant also appreciates the Examiner's indication that claims 4-5, 8, 17-18 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 1-26 are pending in the application. Applicant respectfully requests reexamination and reconsideration of the application.

The Office Action rejects claims 1-3, 6-7, 9-16, 19-20 and 22-26 under 35 U.S.C. 102(e) as being anticipated by Katz (USPN 6,731,954).

Applicant respectfully traverses these rejections for at least the following reasons.

Claim 1

Applicant respectfully submits that the cited Katz reference fails to teach, for example, "selecting a coefficient for said plurality of antennas of said antenna array based at least in part upon said preliminary DOA," as required by claim 1. The Office Action asserts that the weighting means 240 of Katz meets this limitation.

Applicant respectfully disagrees. As shown in FIG. 2 and as discussed at 3: 64 -67 of the Katz reference, "Each separate signal is multiplied by the elementary unit of the antenna element in weighting means 240. Thereafter the signals can be combined in combining means 242." At 3: 50-54 the Katz reference notes that the input to the weighting means 240 comes from the analogue-to-digital converter 202A, 202B and is a sampled and quantized version of an intermediate frequency or baseband frequency signal. The signals input into the weighting means 240 are mutipath-propogated signals presented in complex form. The weighting means 240 of Katz does not "select a coefficient for said plurality of antennas," as required by claim 1, but instead merely "multiplies each signal by the elementary unit of the antenna element." Moreover, nothing in Katz suggests that a coefficient is selected for the plurality of antennas "based ...upon said preliminary DOA," as required by claim 1.

Applicant respectfully submits that the cited Katz reference also fails to teach, for example, "modifying said RF signal with said coefficient for said plurality of antennas of said

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antenna array to generate a modified RF signal,” as required by claim 1. The Office Action asserts that the equalizer 204, demodulator 206, demultiplexer 208, channel codec 216, and multiplexer 116 of Katz meets this limitation. Applicant respectfully disagrees.

The function of these components is to determine whether an input is speech or signaling information. For example, column 4:19-42 of the Katz reference discusses these components: “An equalizer 204 compensates for interference, such as interference caused by multipath propagation. A demodulator 206 takes from the equalized signal a bit stream which is forwarded to a demultiplexer 208. The demultiplexer 208 separates the bit stream from the different time slots into specific logical channels. A channel codec 216 decodes the bit streams of the different logical channels, in other words decides whether the bit stream is signaling information, which is conveyed to a control unit 214, or whether the bit stream is speech, which is conveyed to a speech codec 122 of the base station controller 102. The channel codec 216 also performs error correction.” (Emphasis added.) As shown in FIG. 2 of the Katz reference, nothing in Katz suggests that these DSP components of Katz modify the RF signal received at the antenna, much less that the components modify the RF signal with the coefficient, as required by claim 1. Rather, as discussed at 3: 65-67 of Katz, the signals modified by the equalizer 204 are multipath-propagated signals presented in complex form that have been multiplied by the elementary unit of the antenna element and then combined in combiner 242.

Applicant respectfully submits that the cited Katz reference also fails to teach, for example, “determining said DOA of said RF signal transmitted by said remote unit in said wireless communication system with said modified RF signal,” as required by claim 1. The Office Action asserts that the direction of arrival 302B meets this limitation. Applicant disagrees, and submits that nothing in Katz suggests that a DOA of an RF signal is determined a second time “with said modified RF signal,” as required by claim 1.

For at least the foregoing reasons, Applicant respectfully submits that the Katz reference fails to teach every limitation of claim 1. Accordingly, for at least the foregoing reasons, Applicant respectfully submits that claim 1 is patentable over the Katz reference. In addition, Applicant respectfully submits that dependent claims 2-13 are separately patentable at least by virtue of their dependency from independent claim 1, and also because claims 2-13 each recite additional limitations which are not taught by the Katz reference. Applicant further submits that

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independent claim 14 is patentable for at least the same reasons, and that dependent claims 15-26 are patentable at least by virtue of their dependency from independent claim 14, and also because claims 15-26 each recite additional limitations which are not taught by the Katz reference.

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Conclusion

In conclusion, for the reasons given above, all claims now presently in the application are believed allowable. Should the Examiner have any questions or wish to further discuss this application, Applicant requests that the Examiner contact the undersigned attorney at (480) 385-5060.


If for some reason Applicant has not requested a sufficient extension and/or have not paid a sufficient fee for this response and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

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Dated: February 25 , 2005

By:



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